REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Applicant notes with appreciation the Examiner's withdrawal of the final rejection based on the Appeal Brief. Applicant also appreciates the indication of allowable subject matter in claims 16. The informality on line 15 has been remedied as suggested by the Examiner, and therefore, claim 16 should now be allowed.

In telephone conversations with Examiner Jagannathan and Supervisory Examiner Rao, Applicant expressed its concerns that issues that were already briefed on appealed have been repeated in the new prior art rejection. SPE Rao requested submission of a response setting forth distinctions between the claims and the newly-applied Edmaier reference. In an effort to advance the prosecution of this application rather than re-appeal this case, Applicant has amended several of the claims to emphasize that when a common or single switch node is referred to in a claim, it can not reasonably be interpreted to correspond to a network comprised of plural nodes. Additional dependent claims have been added that incorporate the subject matter of allowable claims 16. Favorable reconsideration is respectfully requested.

Claims 1-15, and 17-25 stand rejected under 35 U.S.C. §102(e) as being anticipated by newly-applied U.S. Patent 5,627,822 to Edmaier et al. This rejection is respectfully traversed.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Edmaier fails to disclose each and every feature of the independent claims.

The invention relates to modern telecommunication networks which employ multiple switch nodes that communicate with each other. As the switch nodes become increasing large in terms of their capacity to handle data, the physical structure for the switch node will likely exceed one physical switch module board (for example, one rack). As a result, the physical infrastructure for the node is often based on several physical switch modules, each containing a number of boards. The modules communicate with one another by way of internal links so that the entire group of switch modules acts as a single cohesive switch node. The reliability of these internal interconnection links between the several modules is crucial. If any interconnection link fails, the entire node operation is jeopardized. Accordingly, redundant interconnection links between modules within one switch node are desirable.

Figure 1 (reproduced below) shows an example telecommunication system 10 that includes switch nodes A-E communicating with each other through various communication paths. These switch nodes A-E provide access points for external devices and networks such as elements 12-20 as shown.

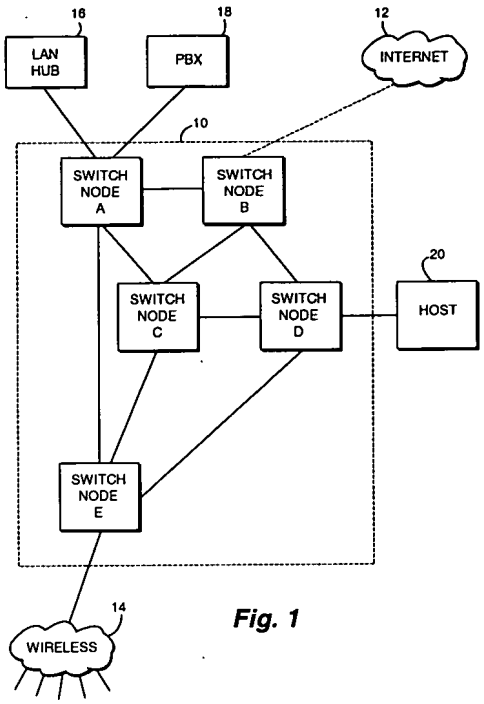
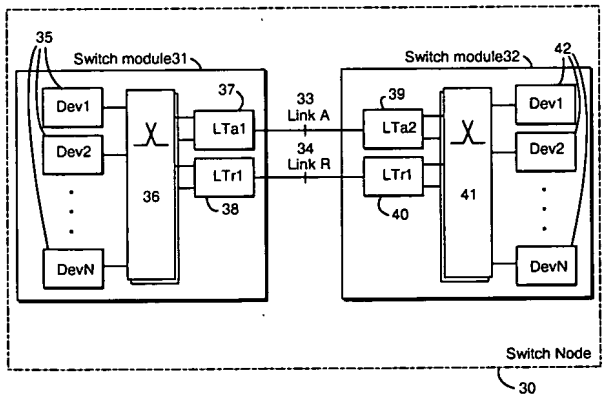


Fig. 1

Figure 3 (reproduced below) illustrates an example embodiment of one switch node 30 that includes two switch modules 31 and 32. Each switch module includes a number of device boards (DEV) 35, 42 and a switch core 36, 41. On the other side of each switch core is a link termination boards (LT). Switch module 31 includes two link termination boards 37 and 38, and switch module 32 includes LTs 39 and 40. Switch module interconnection link 33 (link A) couples link termination board 37 and link termination board 39.

Fig. 3



Since switch modules 31 and 32 must communicate with each other in order to cooperatively implement the switch node 30, it is imperative that the module interconnection link be reliable and secure. For this reason, a second redundant interconnection link 34 (link R) is provided between the two switch modules 31 and 32 to guarantee switch node operation. If link 33 fails, the data flow is rerouted between the switch modules over the redundant link 34.

When a connection is set up through the switch node 30, each data packet includes a routing tag, e.g., a routing tag A, when the primary link A is intended for use (i.e., as in normal circumstances). In the non-limiting example where the switch the node is an asynchronous transfer mode (ATM) switch node 30, the connection is configured on both of the link terminations (LTs) with the same virtual channel identifier (VCI) and the same link segment virtual path identifier VPI/VCI. Thus, when a data packet with a routing tag A is sent through the switch core 36 by the device 35, for example in switch module 31, it is translated by the link termination board either to link A or link R, depending on the link state information known by each link termination board. The routing tag translation is performed in the link termination board to ensure that the packet is transferred to the switch module 32 over the appropriate link. Example embodiments use one or both of the links 33 and 34, and different routing tag values with different tag value translations are described. In each embodiment, each data packet is provided with a routing tag to identify the active interconnection link so that the data packet is output to the active link identified by the routing tag.

The Examiner's interpretation of claim terms and technical terms in Edmaier is inconsistent with how these terms are defined and understood by those skilled in the art. The broadest, reasonable interpretation of claim terms given during examination *must be consistent* with the interpretation with those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353,

1359, (Fed. Cir. 1999). Each of the independent claims refers to a "switch node" that includes within that node first and second switch modules. Applicant understands from the Examiner's Office Action and discussions with the Examiner, that the claimed switch node is being read on Edmaier's communications network ATMN and that the internal switch node modules are being read on the switch nodes CCa and CCb which are connected together by external path links an active path (AP) and an alternative path (EP). The Examiner's interpretation of these claim terms and of Edmaier is unreasonable and inconsistent with the manner in which those skilled in the art would understand those terms and would interpret Edmaier.

The box in Figure 1 labeled ATMN is clearly identified, both in that figure and in the specification at column 6, line 45, as an ATM communications network. The two nodes CCa and CCb are clearly identified in Figure 1 and at column 6, line 47, as switching equipment, which would clearly have been understood by one skilled in the art to be a stand-alone node. Edmaier never describes the ATM network as a switch node or to CCa or CCb as an intra-node witch module. The Examiner fails to point out in either of the switching equipment nodes CCa or CCb where the claimed node-internal module elements are disclosed. Thus, the Examiner's interpretation is inconsistent in the way in which the claim terms are used in Edmaier.

Moreover, those skilled in the art would not consider a network of nodes as corresponding to a node. For example, the McGraw-Hill Dictionary of Scientific and Technical Terms, 5th Edition, Copyright 1994, defines node as "a junction point *within a network.*" Page 1349 (emphasis added). Freeman describes in his text, *Telecommunication Systems Engineering*, 3rd Edition, Copyright 1996, by Wiley & Sons, Inc., that:

> a network is a means of connecting subscribers...a call is initiated a traffic source and received at a traffic sink. *Nodal*

points or nodes in a network are the switches.

See page 6, in chapter 1 entitled, "Some Basics in Conventional Telephony" (emphasis added). On page 7, Freeman further states "[l]et us call a network a *grouping of interworking telephone exchanges*" (emphasis added).

So it is clear that a person skilled in telecommunications would not consider Edmaier's ATM network ATMN as corresponding to a single switching node or a single switching node to be a network. Nor would such a skilled person consider the separate nodes CCa and CCb in the ATM network ATMN to be switch modules internal to a single switch node. Thus, even if one assumed that the terms "switch node" and switch modules were not defined or explained in the instant specification, the Examiner still must read these claim terms and the terms as used in the Edmaier reference as one skilled in the art would.[1]

In addition, the Federal Circuit has made it clear that claims are not to be read in a vacuum—even during United States Patent and Trademark Office examination. Claim limitations are to be "interpreted in light of the specification giving them the 'broadest, reasonable interpretation.'"[2] As described above, the terms network, switch node, and switch module have been illustrated and explained in the specification. A telecommunication system 10, which corresponds to a network of switch nodes, as shown in Figure 1, is described on page 4 of the instant specification. Indeed, the network 10 in Figure 1 of the instant application looks quite similar to the network ATMN in Edmaier in that they both include a plurality of switch nodes coupled together by communications links, and they both are connected to other networks. Figure 3 of the instant application clearly illustrates that a switch node 30 includes two internal

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[1] *Rexford Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001).

[2] *In re Marosi*, 710 F. 2d 799, 802 (Fed. Cir. 1983) (*quoting In re Okuzawa*, 537 F. 2d 545, 548, CCPA 1976).

switch modules 31 and 32. Pages 4 of 5 of the specification confirm that each switch module includes a variety of devices coupled to a switch core and at least two link termination boards. The internal switch modules are interconnected by two internal links 33 and 34. Reading the instant specification and considering its figures, a person skilled in the art would understand that the independent claims on appeal are directed to a single switch node (not to a network of nodes) and to the interlinking of switch modules within that single switch node to ensure reliable communications between the modules within the node.

The Examiner's claim construction and interpretation of Edmaier are completely at odds with the meanings that a person skilled in the art would attribute to those terms and to the meaning attributed to those terms in the instant specification and figures. Edmaier and the instant application use these words consistently and in the way a person of ordinary skill would use them. The Examiner is ignoring the commonly understood and accepted meanings of the terms switch node, switch module, and network. If the Examiner elects to maintain this claim construction, the Examiner is requested to provide Applicant with documentary evidence to support the Examiner's position.

Claim 1 has been amended to emphasize that the method relates to "interlinking first and second switch modules in a common switch node for use in a communications network where the common switch node is coupled to other switch nodes by one or more external links." The claimed "first and second redundant node-internal links" provided between the "first and second switch modules" are also "contained within the common switch node." None of these features is disclosed in Edmaier.

Edmaier also fails to disclose "outputting from the first switch module the data packet *only* to said active one of said first and second links identified by the routing tag." To the

contrary, Edmaier's approach is to duplicate the cell stream to form identical first and second message cell streams in the first switching equipment CCa located at the start of the routing pair and then separately supply the duplicated message cell streams via the active route AP and the alternative route EP to the second switching equipment CCb located at the end of the route. See claim 1, at column 13, lines 27-35. Indeed, all of Edmaier's independent claims require duplication of the cell stream with separate supply of the cell stream over both the active and alternate routes. See also column 2, lines 21-32. Duplicate cell streams coupled with routing those cells on both the active and alternate routes contradicts with the language quoted above in which a first switch module in a node outputs data packets only to the active one of the two links identified by the routing tag.

The Examiner alleges that claim 4 is anticipated by Edmaier. However, Applicant has been unable to find text within Edmaier that describes "detecting a fault condition in the active one of said and second links." Applicants would appreciate the Examiner pointing out where such fault detection is described in Edmaier.

Claim 5 recites a "module within a switch node operatively linkable with a second module within the same switch node." As with claim 1, Edmaier fails to disclose applying a node-internal routing tag to packets in stream "to direct the stream to only one of the first and second redundant links so that only the one link is used to route data packets to the second module." Edmaier employs redundant streams and both links AP and EP to convey data packets between the two switch nodes (which are not switch modules as defined in the claim).

Claim 13 recites a "single switch node, comprising within the physical boundaries of that node" "first and second switch modules operatively linked to each within the single switch node." The remaining recitations relate to elements contained within each one of the first and

second switch modules. The Examiner is requested to point out where each one of these recited features is found in Edmaier by identifying a specific reference numeral, for a particular block illustrated in Edmaier drawings.

Claim 17 should be allowed because it incorporates allowable features from allowable claim 16.

Claim 20 recites a "single switch node" with N first links and M second links, all of which connect "first and second switch modules contained within physical boundaries of the single switch node." Edmaier fails to disclose this feature.

Edmaier also fails to disclose that "each of the first and second node-internal switch modules" includes the recited fault detector, switch core, device side switch core interface, and link side switch core interface." It is not even clear where Edmaier discloses a fault detector internal or even external to each switch module contained within the single switch node. Nor does Edmaier describe each switch modules device side switch port interface adding "internal routing tags to the data packets identifying *only* the N number of currently operable first and second links." As explained above, Edmaier duplicates the cell streams and sends them on both the active path AP and the alternate path EP.

New claims 26-29 recite the allowable subject matter of claim 16.

The application is in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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